PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	EOD ELIDTHED ACTION	See Form PCT/IPEA/416						
2003.0009/WO	FOR FURTHER ACTION							
International application No.	International filing date (day/month/year)							
PCT/DE2004/000448	05.03.2004	05.03.2003						
International Patent Classification (IPC) or national classification and IPC								
Applicant SIRONA DENTAL SYSTEMS GMBH								
This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.								
2. This REPORT consists of a total of 6 sheets, including this cover sheet.								
3. This report is also accompanied by ANNEXES, comprising:								
a. (sent to the applicant and	to the International Bureau) a total of 3	sheets, as follows:						
sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).								
sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.								
b. (sent to the International	Bureau only) a total of (indicate type and n	umber of electronic carrier(s))						
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, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).								
4. This report contains indications relati	ng to the following items:							
Box No. I Basis of the	report							
Box No. II Priority								
Box No. III Non-establi	shment of opinion with regard to novelty, i	nventive step and industrial applicability						
Box No. IV Lack of uni								
Box No. VI Certain doc	suments cited							
Box No. VII Certain def	Box No. VII Certain defects in the international application							
Box No. VIII Certain obs	Box No. VIII Certain observations on the international application							
Date of submission of the demand	Date of completion	of this report						
	Date of completion	·						
Name and mailing address of the IPEA/EP	Authorized officer							
Facsimile No.	Telephone No.							

Translation

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/DE2004/000448

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless indicated under this item. This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of: international search (Rule 12.3 and 23.1(b))	otherwise ,
which is the language of a translation furnished for the purposes of: international search (Rule 12.3 and 23.1(b))	,
publication of the international application (Rule 12.4)	
international preliminary examination (Rule 55.2 and/or 55.3)	
2. With regard to the elements of the international application, this report is based on (replacement sheets which have been fur receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not this report): the international application as originally filed/furnished	
the description:	
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• • • • • • • • • • • • • • • • • • • •	CW 141 Institut
pages* received by this Authority on	
the claims:	
nos as originally fil	ed/furnished
nos.* as amended (together with any statement) und 24.09.2004 with	
nos.* 1-13 received by this Authority on letter of 22.09.	
nos.* received by this Authority on	
the drawings:	
sheets 1/10-10/10 as originally fil	led/furnished
sheets* received by this Authority on	
sheets* received by this Authority on	
a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.	
The amendments have resulted in the cancellation of:	
the description, pages	
the claims, nos.	
the drawings, sheets/figs	
the sequence listing (specify):	
any table(s) related to sequence listing (specify):	
4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).	en made, since
the description, pages	
the claims, nos.	
the drawings, sheets/figs	
the sequence listing (specify):	
any table(s) related to sequence listing (specify):	
* If item 4 applies, some or all of those sheets may be marked "superseded."	

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Box	No. V	Reasoned statemen	t under Ar nations sup	ticle 35(2) with regard to novelty, inventive step or industrial applicability; porting such statement		
1.	Statement					
	Novelty	(N)		1-13		
			Claims		NO	
	Inventive	e step (IS)	Claims			
			Claims	1-13	NO	
	Industria	l applicability (IA)	Claims	1-13	YES	
			Claims		NO	
2.	Citations and	d explanations (Rule 7	70.7)			
	1.	This repo	rt ma	kes reference to the following		
ĺ		document:				
		D1: US-	A-6 0	49 743 (BABA MASAMI), 11 April 2000		
		(20	00-04	-11)		
	2.	The application does not meet the requirements of				
		PCT Artic	le 6	because claim 1 is unclear.		
	2.1	The expression degree of preparation (4) in claim				
		1 is not supported by the description. In this				
		report, it is considered that the expression				
		preparati	on ed	ge (4) is meant.		
	2.2			in parentheses (disclosure in the		
	entire embodiment) causes a lack of clarity. In					
		this repo	rt, t	his expression is considered as		
		having be	en de	eleted.		

3. The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 does not involve an inventive step (PCT Article 33(3)).

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Document D1 is considered to constitute the prior art closest to the subject matter of claim 1 and discloses (the references in parentheses are to that document):

a device for selecting a region of a tooth restoration body represented in a 3D configuration, at least parts of the region boundaries being designed as tooth-specific lines (see column 4, lines 51-61; and figures 4A and 4B).

The subject matter of claim 1 therefore differs from the known device in that each tooth-specific line and/or the preparation edge (4) is subdivided into four parts which represent the mesial-lingual, mesial-buccal, distal-lingual and distal-buccal corners of the tooth.

The present invention can therefore be considered to address the problem of providing an alternative device for selecting a region of a tooth restoration body represented in a 3D configuration.

The solution proposed in claim 1 of the present application cannot be considered inventive (PCT Article 33(3)) for the following reasons:

Document D1 discloses a device in which a 3D configuration of a restoration body is subdivided

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

into various deformable regions P(n) and A(n) defined by tooth-specific lines (11, 12, 13, 18 and ML) (see column 7, line 47 - column 8, line 33; and figures 4A-6C). The subdivision of each tooth-specific line into four parts which represent the mesial-lingual, mesial-buccal, distal-lingual and distal-buccal corners of the tooth is considered to be a minor modification of the device known from D1 which lies within the scope of what a person skilled in the art routinely does, on the basis of familiar considerations, especially since the advantages achieved thereby are easily foreseeable.

Consequently, the subject matter of claim 1 also fails to involve an inventive step.

- 4. Dependent claims 2-13 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT inventive step requirements.
- 4.1 In document D1, the regions are defined by the selection of tooth-specific lines (claim 2) (see column 4, lines 51-61).

In the device described in document D1, the marginal ridge, groove and cuspid apexes are used as tooth-specific lines (claim 3) (see column 4, lines 29-35).

Document D1 discloses a device which makes it possible to select the region of a dental cuspid

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

up to the cuspid boundaries by selecting a toothspecific point for the position of the cuspid apex (claim 6) (see figure 5).

Moreover, document D1 discloses a distinguishable representation of the selected region (claim 9) (see column 8, lines 23-33, and figures 6A-6C), evaluation and comparison means for geometric data (claim 10) (see column 4, lines 1-5) and a CAD system construction tool (claim 11) (see column 9, lines 41-56).

4.2 Dependent claims 4, 5, 7, 8, 12 and 13 relate to minor modifications of the device as per claim 1 which lie within the scope of what a person skilled in the art routinely does, on the basis of familiar considerations, especially since the advantages achieved thereby are easily foreseeable. Consequently, the subject matter of claims 4, 5, 7, 8, 12 and 13 also fails to involve an inventive step.